

AJV:kaa 03/09/05 362077
PATENT

Attorney Reference Number 6047-67518-01
Application Number 10/731,995

Remarks

Reconsideration is requested in view of the preceding amendments and the following remarks. Claims 40-46 and 49 are pending, and new claims 56-59 are submitted for consideration. Upon entry of this Amendment, claims 40-46, 49 and 56-59 are in the application.

Claim 42 is amended to correct a typographical error. This claim is now indicated as depending from claim 40, rather than from claim 42. Support for this amendment and for the new claims can be found in the specification at, for example: page 6, line 25 to page 7, line 2; page 7, lines 18-22; page 8, lines 18-22; and page 10, lines 15-16. No new matter is introduced.

Claim 42 was indicated as allowable if amended to recite the features of its base claim and any intervening claims. New claim 56 corresponds to claim 42 amended in this manner, and thus new claim 56 and dependent claims 57-59 are properly allowable.

Claims 40 and 43-46 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Pat. No. 6,038,136 to Weber ("Weber"). This rejection is traversed. Claim 40 recites, in part, a mold for molding a package for at least one die bonded to a substrate, the mold defining a rib having a thickness at least as great as a solder bump thickness. Weber does not teach or suggest a mold defining a rib. In Fig. 6, Weber shows that "the mold is provided with cavities 36 for receiving the substrate solder bumps 24 on the lower side of the substrate. Alternatively, the mold cavities 36 may be eliminated and the substrate solder bumps 24 or pins may be attached after underfilling." See col. 4, lines 26-30 (emphasis added). Also, "FIG. 8 is a cross-sectional side view of the mold of FIG. 6 when underfilling has been completed." See col. 3, lines 9-10 (emphasis added). Fig. 8 shows that, in completed form, the cavities 36 are not filled with mold compound 16. Thus Weber does teach or suggest a mold portion that defines a rib, as suggested by the Action; instead, Weber teaches a mold that may have cavities, which do not mold anything, but merely accommodate solder bumps. Accordingly, Weber fails to teach, suggest or provide any motivation for the mold recited in claim 40, and thus claim 40, dependent claims 43-46 are properly allowable over Weber for at least these reasons.

Claims 41 and 49 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Weber in view of U.S. Pat. No. 5,914,531 to Tsunoda et al. ("Tsunoda"). Claims 41 and 49 both recite a mold portion that defines a rib having a thickness at least as great as a solder bump

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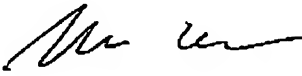
thickness. As explained above with respect to claim 40, Weber fails to teach, suggest or provide any motivation for a mold that defines a rib. Tsunoda, alone or in combination with Weber, also fails to teach, suggest or provide any motivation for a mold portion that defines a rib having a thickness at least as great as a solder bump thickness. Claims 41 and 49 are properly allowable over any combination of Weber and Tsunoda for at least these reasons.

In view of the preceding amendment and remarks, all pending claims are in condition for allowance, and action to such end is requested. If any issues remain, the Examiner is requested to call the undersigned attorney.

Respectfully submitted,

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